

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Children’s Television Programming Rules	)	MB Docket No. 18-202
	)	
Modernization of Media Regulation Initiative	)	MB Docket No. 17-105

**COMMENTS OF AMERICA’S PUBLIC TELEVISION STATIONS,  
THE CORPORATION FOR PUBLIC BROADCASTING, AND  
THE PUBLIC BROADCASTING SERVICE**

America’s Public Television Stations (“APTS”),<sup>1</sup> the Corporation for Public Broadcasting (“CPB”),<sup>2</sup> and the Public Broadcasting Service (“PBS”)<sup>3</sup> (collectively, “PTV”) welcome this opportunity to submit comments in response to the Federal Communications Commission’s (the “Commission”) Notice of Proposed Rulemaking regarding proposed revisions to the children’s television programming rules (the “Notice”).<sup>4</sup> As organizations that have leveraged the power of media to educate and inspire children along with their parents and teachers for almost fifty years, PTV appreciates the Commission’s efforts in launching this rulemaking to explore the needs of children and their parents in the evolving media landscape.

PTV has always been and continues to be completely and consistently committed to educating young people. This commitment has evolved, but never wavered, over the past five

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<sup>1</sup> APTS is a non-profit organization whose membership comprises the licensees of nearly all of the nation’s CPB-qualified noncommercial educational television stations. The APTS mission is to support the continued growth and development of a strong and financially sound noncommercial television service for the American public.

<sup>2</sup> CPB is a private, non-profit corporation created and authorized by the Public Broadcasting Act of 1967 to facilitate and promote a national system of public telecommunications. Pursuant to its authority, CPB has provided millions of dollars in grant monies for support and development of public broadcasting stations and programming.

<sup>3</sup> PBS, with over 330 member stations across the country, offers all Americans the opportunity to explore new ideas and new worlds through television and online content. Each month, PBS reaches nearly 100 million people through television and nearly 30 million people online, inviting them to experience the worlds of science, history, nature, and public affairs; to hear diverse viewpoints; and to take front row seats to world-class drama and performances.

<sup>4</sup> FCC Notice of Proposed Rulemaking, *In the Matter of Children’s Television Programming Rules*, FCC 18-93, MB Docket No. 18-202 (rel. July 13, 2018) [hereinafter “Notice”].

decades to keep pace with the needs of children and to fully take advantage of the technologies that they use to access our content. PTV is routinely recognized as an innovator and a leader in this space, and we embrace this role wholeheartedly – with great pride and a significant sense of responsibility. PTV’s work has long gone so far above and beyond the statutory and regulatory requirements that we satisfy our legal obligations for the entire week by mid-day on Monday, and this fact will not change regardless of how the Commission proceeds in this or any other rulemaking.

In fact, just last year PTV dramatically expanded access to research-based, curriculum-driven children’s programming with the launch of a new 24/7 PBS KIDS broadcast and online streaming channel, which is the only free national 24/7 children’s television service in the country. This initiative ensures that the high-quality content of PBS KIDS is freely available to all children and caregivers on a platform and at a time that works for them, including primetime, weekends, and other out-of-school times when they are most likely to tune in. The new channel has been a game-changer for families across the country, performing especially well among underserved children.<sup>5</sup> Thanks to the channel, children’s time spent viewing PBS has increased 47 percent among low-income families and 32 percent in broadcast-only homes.<sup>6</sup> This service is a core part of PBS’s mission to address the reality that more than half of 3- and 4-year-olds in the U.S. are not able to attend preschool programs and 21 percent of children do not have access to broadband in the home.<sup>7</sup> As detailed herein, PTV has adopted an “all-of-the-above” approach to reaching children on all platforms, given that children’s access to educational content has fragmented — with broadcast

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<sup>5</sup> See [www.pbs.org/value/kids-parents](http://www.pbs.org/value/kids-parents) (providing testimonial videos with families across the country that have been positively impacted by PBS KIDS service).

<sup>6</sup> Nielsen NPOWER L+7, 6/26/2017 - 7/1/2018 vs. 6/27/2016 - 6/25/2017, M-Su 6A-6A Reach, All PBS Stations, K2-8 HH.

<sup>7</sup> The Annie E. Casey Foundation. Kids Count Data Book. Nielsen High Speed Internet Access, % K2-8 population, 2017.

distribution continuing to remain an essential part of PTV's work, even as broadband distribution has grown to become a critical way of serving children with educational media. PTV conducts and commissions exhaustive research to carefully evaluate the effectiveness and impact of its educational content, and PTV supports proposals to expand research across the media ecosystem to study the role of media in children's lives.

**I. The Longstanding Work of PTV Demonstrates the Significant Benefits of Noncommercial Educational Media for Children and Justifies the Commission's Light-Touch Regulatory Approach for PTV Stations.**

In 1991, the Commission adopted a fittingly light-touch regulatory approach for noncommercial stations under the Children's Television Act. The Commission found that the recordkeeping and reporting requirements were unnecessary given the commitment that noncommercial stations had demonstrated to serving children.<sup>8</sup> The Commission also determined that noncommercial licensees should be exempt from public information initiatives, such as identifying programs for program guides and listings information.<sup>9</sup> The wisdom of this approach has been clearly borne out over the ensuing decades. PTV has continued to be a leader in children's educational media, going far above and beyond anything that the Commission might require of other broadcasters.

The Commission's proposal to align the E/I symbol requirements with its long-standing approach to other public information initiatives is sensible.<sup>10</sup> The PTV content itself would of course continue to be research-based, curriculum-aligned material that is developed in concert with education advisors, designed to serve concrete educational goals, and grounded in a whole-child

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<sup>8</sup> Notice at ¶ 5.

<sup>9</sup> *Id.* at ¶ 8.

<sup>10</sup> The symbol is added to programming prior to delivery to stations and it would be cost prohibitive to later adjust its display on broadcast or any other distribution platform, including mobile devices where PTV now live streams all of its educational children's content for free. As a result of limited resources, the existing requirement on public stations is effectively transferred to all new and emerging platforms.

curriculum approach to help prepare children for success in school and in life. Given PTV's firmly demonstrated commitment to educational programming, the E/I symbol – like the other public information initiatives under these rules – need not be applied to PTV stations.

PBS member stations, which make up 90 percent of all noncommercial educational television licenses, are required as a condition of membership to broadcast at least 7 hours of educational children's content per weekday on the station's primary video channel (i.e., 35 hours per week). This level of commitment is one of the reasons that 75 percent of all children ages two to eight watch their local public television station.<sup>11</sup> Moreover, African-American, Hispanic, and low-income households make up a larger percentage of the PBS KIDS audience as compared to their representation in the U.S. population. PBS stations reach 4 million children from low-income homes, 5.3 million African-American children, and 8.4 million Hispanic children in each year.<sup>12</sup> This extensive reach would be even broader if nationwide satellite operators agreed to make the free PBS KIDS multicast channel available to their collective 31 million subscribers.

In addition to this broadcast reach, PBS KIDS averages 253 million video streams per month across all digital platforms, and streaming on PBS KIDS accounts for over one-third (35 percent) of all time spent watching children's videos online.<sup>13</sup> PBS LearningMedia and local station portals also make PTV's educational content freely available to every classroom across the country.<sup>14</sup> Educators for Pre-K through 12<sup>th</sup> grade can access tens of thousands of classroom-ready, standards-aligned, interactive resources for free on the platform (from the best of public television content and

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<sup>11</sup> Nielsen NPOWER L+7, 1/30/2017-1/28/2018, All PBS Stations, M-Su 6A-6A TP reach, 50% unif., 1+min.

<sup>12</sup> Nielsen NPOWER L+7, 4Q17 PBS Child Multi-weekly Reach, HH Inc<\$40K, HH (000) vs. UE. Nielsen NPOWER L+7, 1/30/2017-1/28/2018, All PBS Stations, M-Su 6A-6A TP reach, 50% unif., 1+min.; K2-11: HH Inc<\$25K, Black race, Hispanic origin.

<sup>13</sup> Google Analytics, Jan. 2017 – Dec. 2017; comScore Video Metrix April 2018. Mobile and OTT video streaming only included for competitors in the Family & Youth – Kids category who tag. This does not include YouTube or YouTube Kids.

<sup>14</sup> PBS LearningMedia is a Pre-K through 12<sup>th</sup> grade classroom service with more than a million registered users that reaches over 25 million students, *available at* [www.pbslearningmedia.org](http://www.pbslearningmedia.org).

other trusted sources such as the Library of Congress, National Archives, NASA, and the National Science Foundation), which nearly one million unique users visit each month during the school year to help teach 25 million students across the country.<sup>15</sup>

The expansive reach of PBS KIDS television and digital content described above is meaningful specifically because research confirms the tremendously positive impact of this content on children's learning. Third-party research over the past two decades has resoundingly established the efficacy of PBS KIDS television and digital content in meeting formal learning objectives. Research recently conducted by Dr. Lisa Hurwitz measured the short- and long-term effects of PBS KIDS content on young children's literacy. Findings from this formal, non-commissioned meta-analysis of 45 evaluations were published in 2018 and examined the effects of PBS KIDS television and digital media exposure on young children's literacy skills. The meta-analysis review of Dr. Hurwitz found that children who consumed PBS KIDS media gained the equivalent of 1.5 months of literacy development beyond typical growth. The study found that PBS KIDS literacy-themed content was particularly effective at promoting children's vocabulary and language sound knowledge. Significant positive effects were also found for alphabet knowledge.<sup>16</sup> Ultimately, the study found that PBS KIDS content has a comparable educational impact to that of a comprehensive, high-quality, early childcare or preschool program.

Other independent research studies document that children's use of PBS KIDS media at home and as part of structured lesson plans in school is linked to significant school readiness and social-emotional benefits. For example, two studies from Texas Tech University have demonstrated the positive impact of Daniel Tiger's Neighborhood on social-emotional learning for young

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<sup>15</sup> Google Analytics, Sept. 1, 2017 – June 30, 2018.

<sup>16</sup> Hurwitz, L. B. (in press). *Getting a Read on Ready To Learn Media: A Meta-analytic Review of Effects on Literacy*. Child Development, available at <https://onlinelibrary.wiley.com/doi/abs/10.1111/cdev.13043>. This study included 24,624 unique child participants.

children. In one of these studies, children ages 2-6, particularly those among the low-income group, who watched the series and regularly discussed it with their parents demonstrated greater empathy, were better able to recognize emotions, and felt more confident in social interactions than their peers who did not watch the show.<sup>17</sup> Another study from Texas Tech found that children who played with the Daniel Tiger's Grr-ific Feelings mobile application and watched episodes of the series exhibited significantly higher levels of emotion regulation than children who did not — and these positive gains lasted long after the study concluded.<sup>18</sup>

PBS KIDS also distributes a range of content designed to develop children's math skills, which studies show results in demonstrated increases in children's math scores. Specifically, a media experience for children from low-income families that utilized television and digital resources from the PBS KIDS series *Odd Squad* saw improvements in math learning outcomes in skip counting, pattern recognition, and addition and subtraction skills.<sup>19</sup> In another study, children who used media content from the PBS KIDS series *Peg+Cat* showed improvement in critical math areas involving ordinal numbers, spatial relationships, and 3-D shapes.<sup>20</sup> Moreover, researchers have recently conducted formative studies and playtesting of new PBS KIDS science and inquiry-focused broadcast and digital content. Preliminary findings demonstrate that PBS offers high-quality content that shows promise in its ability to personalize, adapt, and foster STEM learning.<sup>21</sup>

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<sup>17</sup> Watching Right TV Shows Can Help Kids Develop Social Skills, Texas Tech University, 2016, *available at* [https://www.researchgate.net/publication/304905034\\_Relation\\_between\\_active\\_mediation\\_exposure\\_to\\_Daniel\\_Tiger's\\_Neighborhood\\_and\\_US\\_preschoolers'\\_social\\_and\\_emotional\\_development](https://www.researchgate.net/publication/304905034_Relation_between_active_mediation_exposure_to_Daniel_Tiger's_Neighborhood_and_US_preschoolers'_social_and_emotional_development).

<sup>18</sup> *Promoting preschoolers' emotional competence through prosocial TV and mobile app use*, Texas Tech University, 2018, *available at* <https://www.tandfonline.com/doi/abs/10.1080/15213269.2018.1476890>.

<sup>19</sup> *Odd Squad: Learning Math with PBS KIDS Transmedia Content at School and Home*, Tiu, McCarthy, & Li, 2015, *available at* <https://www.wested.org/resources/odd-squad-math-pbs>.

<sup>20</sup> *Supporting Parent-Child Experiences with PEG+CAT Early Math Concepts*, EDC-SRI International, 2015, *available at* <https://www.sri.com/work/publications/supporting-parent-child-experiences-pegcat-early-math-concepts-report-cpb-pbs>. Both *Odd Squad* and *Peg+Cat* were funded in large part by critical support from the Department of Education's Ready-to-Learn grant program.

<sup>21</sup> *Play & Learn Science Playtesting Report*, Borland, J., 2017.; *Fish Force Playtesting Evaluation Report.*, Borland, J. (2017).

To support the design of PBS KIDS content, PBS has developed Learning Frameworks for Science, Literacy-ELA, Mathematics, Social Studies, and Social-Emotional Learning. These Frameworks provide PBS KIDS content producers with guidelines for the appropriate skills and learning progressions for children in the PBS KIDS audience. These Frameworks, written with the support of PBS KIDS Curriculum Advisors, are research-based and align with the latest national and state standards for preschool and grades K-2, while also taking into account recommendations and guidelines from key groups in early childhood education such as Head Start and the National Association for the Education of Young Children.

The development of PBS KIDS content is informed by the principles of Universal Design for Learning (UDL) with the goal of creating media that embraces the diversity of the PBS KIDS viewers and users, reduces barriers, and reaches the widest possible audience.<sup>22</sup> UDL experts at the Center for Applied Special Technology define UDL as “a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.” PBS KIDS has been applying this philosophy to the development of media content across the board, creating experiences that are accessible to the widest possible audience of children, including youth with disabilities. Guided by UDL experts, including Michael Conn-Powers, Meryl Alper, and David Rose, PBS KIDS is committed to creating educational media experiences that lead to more engaged learners and more impactful outcomes for kids.<sup>23</sup>

In addition to all of this national work, local PTV stations across the country directly help children, families, and educators take full advantage of public television’s educational content. By partnering with schools, Head Start centers, Boys and Girls Clubs, community libraries, and other institutions, local stations offer early learning opportunities for children, educational engagement

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<sup>22</sup> Rodriguez, J., Conn-Powers, M. *How Ready To Learn Is Bringing Inclusive Design To PBS KIDS*. In S. Pasnik (Ed.), *Getting Ready to Learn: Creating Effective, Educational Children’s Media*. New York: Routledge (in press, Dec. 2018).

<sup>23</sup> *Id.*

for families, and professional learning for educators. For instance, ideastream® in Cleveland, Ohio hosted educators at the 2017 Science + Mathematics Think-In. The event provided professional learning opportunities in science and math instruction for educators in partnership with the Great Lakes Science Center, the Cleveland Museum of Natural History, and the Ohio Department of Education. The station’s education staff provides coaching to teachers within classrooms on literacy and instructional technology through the school year. Moreover, ideastream has created a digital learning center in the Metro Health Medical Center waiting room so that families waiting with children can engage with school readiness-driven public media applications and video content – with the goal of encouraging learning together anytime, anywhere.

Georgia Public Broadcasting (GPB) created the Georgia Studies Digital Textbook, which teaches the history, culture, and geography of Georgia. This modern digital textbook provides interactive capabilities and multimedia enhancements, which are updated regularly to ensure that the content is aligned to the most recent Georgia Performance Standards. To complement the textbook, GPB also offers virtual field trips to children across the state. These are but two of the many examples of children’s outreach services provided by local public stations.

## **II. The Next Generation Broadcast Television Standard Will Enable Dramatic and Meaningful Improvements in Children’s Educational Media**

The Next Generation broadcast television standard will enable PTV to advance its longstanding public service mission by greatly expanding access to *interactive* educational children’s programming. As PTV has previously noted, the Next Generation standard has the potential to significantly advance our educational mission.<sup>24</sup> By creating the opportunity for interactive broadcast programming, ATSC 3.0 enables the possibility for children’s television

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<sup>24</sup> Comments of the Public Broadcasting Service and the Corporation for Public Broadcasting, *In the Matter of Authorizing Permissive Use of the “Next Generation” Broadcast Television Standard*, GN Docket No. 16-142, 3–6 (filed May 26, 2016).



programming that incorporates educational activities that reinforce the learning objectives of public television’s curriculum-driven programming.

The PBS KIDS 24/7 children’s service is currently broadcast by local stations and live streamed on digital platforms, delivering over 3 billion videos per year to more than 11 million unique users of our children’s educational content. The live stream experience already includes integrated games that extend learning opportunities and that are grounded in research demonstrating measurable gains when children engage with content across platforms. The functionality of ATSC 3.0 will allow these interactive educational experiences to be provided to children through over-the-air broadcast television. ATSC 3.0 will enable public television stations to leverage both broadcast and broadband infrastructure fully by distributing truly immersive educational content over-the-air to the many families and children that they serve.

PBS and its producers have been testing, researching, and deploying multi-platform educational children’s content for many years (with critical support from the U.S. Department of Education).<sup>25</sup> PBS KIDS has developed and curated collections of multiplatform content that allow children to actively engage with curriculum-driven educational content on a range of devices, and the educational efficacy of these resources has been rigorously studied by researchers at WestEd, SRI International, and the Education Development Center.<sup>26</sup> For instance, one 2015 study found that children who engaged with certain PBS KIDS multi-platform content (videos, plus games and activities) improved their average scores from pre-test to post-test in foundational math skills (such as skip counting and pattern recognition) by up to 25 percent.<sup>27</sup> These impressive educational gains

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<sup>25</sup> Comments of the Public Broadcasting Service, Corporation for Public Broadcasting, and America’s Public Television Stations, *In the Matter of Authorizing Permissive Use of the “Next Generation” Broadcast Television Standard*, GN Docket No. 16-142, 5–6 (filed May 9, 2017).

<sup>26</sup> See PBS KIDS Content Studies, available at [www.pbskids.org/lab/research/content-studies](http://www.pbskids.org/lab/research/content-studies).

<sup>27</sup> Odd Squad: Learning Math with PBS KIDS Transmedia Content at School and Home, WestEd, 15–16 (Oct. 2015), available at [www-tc.pbskids.org/lab/media/pdfs/research/Y5-WestEd-OddSquad\\_FullReport.pdf](http://www-tc.pbskids.org/lab/media/pdfs/research/Y5-WestEd-OddSquad_FullReport.pdf).

have been accomplished due to the opportunities afforded to children to interact hands-on with the content through digital applications and games that reinforce educational lessons introduced in the TV content (as well as through PBS's use of curriculum advisors to ensure that its content is effective).

While this multi-platform approach has been highly successful to date, its reach and impact could be greatly increased through the potential of ATSC 3.0. The ability to deliver truly immersive and interactive content via broadcast to the many families and children that depend upon PBS KIDS content could be transformative. An educational service provided via the ATSC 3.0 platform could provide significant benefits to the many children who do not currently have the resources of a formal early childhood curriculum available to them. Moreover, ATSC 3.0 could offer the potential to support parents in deepening their children's learning in innovative new ways. PTV could leverage ATSC 3.0 to provide helpful videos, tips, and hands-on activities to encourage real-world parent-child interaction around learning goals.

This forward-looking work to leverage the power of emerging technologies to maximize the educational opportunities for children and to deliver free content nationwide requires significant resources. PTV welcomes the Commission's proposal to better enable broadcasters to support educational programming aired on other stations in their market.<sup>28</sup> Such sponsorship efforts could supplement existing funding sources, thereby enabling PTV stations to develop additional curriculum-driven, research-based content and to deliver it through their expansive distribution platforms that are freely available to all Americans.

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<sup>28</sup> Notice at ¶ 44.

Respectfully submitted,

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